

Work Order ID 124388-25

September-11-14 12:04:14 PM

Page 1

Item ID: 646.3210

Revision ID:

Item Name: Support

Start Date: 9/10/14

Required Date: 9/10/14

Reference:

Start Qty: 10.00

Req'd Qty: 10.00

10

10

N900040100

Cust Item ID:

Customer:

Setup Start *NS1*

Stop *NS2*

Approvals:

Process Plan: MJS

Date: 14-09-17

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
646.3200	n/c								

100

100

Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blank at 10.35"

0.00

0.00

12

0

JK 2014-11-06

110

110

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB146

DWG REV: N/C

FOLIO REV: A4

0.00

0.00

12

1

DAS
20
9-89 14-11-07

DAS
44
9-89 14/11/08

2- deburr and break all sharp edges

PTO
→

DQA:

Date: 14/12/11



QA Closed:

Date: 11/12/07

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: 124388-1	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. 646.3210		Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. 11-4275		Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	14-11-07	110	1	wall thickness of .125" is under tolerance at .116"	DAS 29 9-89	Operator moved origin in wrong direction Scrap & Replace B 129891	20 9-89 14-11-07	H. - 14/11/07	DAS 29 9-89
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☒ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge	☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 124388

124388

Page 2

September-11-14 12:04:14 PM

Item ID: 646.3210 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Support

Start Date: 9/10/14 Start Qty: 10.00 *10* Cust Item ID:

Required Date: 9/10/14 Req'd Qty: 10.00 *10* Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00				12	1		DAS 20 9-89 14-11-07
120									
QC	Memo	0.00							
Quality Control									
130	QC8- Inspect parts - second check	0.00				1	0		DAS 08 9-89
130									
QC	Memo	0.00							
Quality Control									
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
140									
Outsource4	Memo	0.00							
Outsource process - Anodize	Issue P/O to ATG : 26682								
	1- Black Anodize as per Dwg 646.3200								
	2- PRIME AS PER DWG, SEE NOTE #2								
	Certification of Conformity is required								

CZ 14/12/02 0

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Accept

Setup Start *NS1*

Stop ***NS2***

10

Cust Item ID:

10

Customer:

Reference:

Run Start *NR1*

Stop ***NR2***

Insp.
Stamp

0.00

0.00

Packaging

0.00

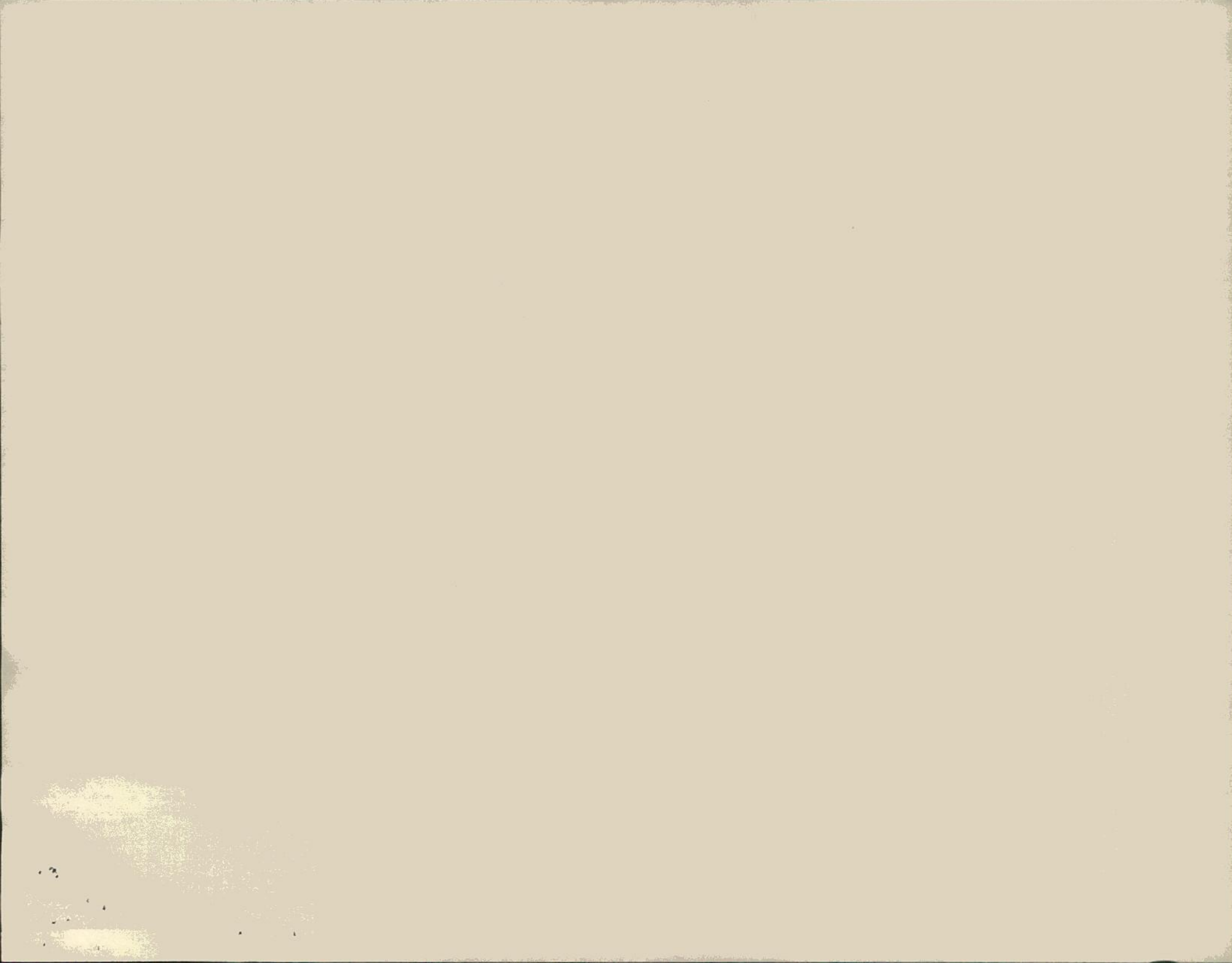
0.00

Quality Control

0.00

0.00

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV



Work Order ID 124388

124388

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September-11-14 12:04:14 PM

Item ID: 646.3210 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Support

Start Date: 9/10/14 Start Qty: 10.00 *10* Cust Item ID:

Required Date: 9/10/14 Req'd Qty: 10.00 *10* Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

~~1501-13~~

15/1/16

AB-1-12



Picklist Print

September-11-14 12:04:13 PM

Page 1

Work Order ID: 124388

124388

Parent Item: 646.3210

646.3210

Parent Item Name: Support

Start Date: 9/10/14

Required Date: 9/10/14

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A NEW ISSUE 12-11-09 JLM VERIFIED BY:DD :

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B6.000X1.000		Purchased	No				f	20.3000		10			
M7075T6B6 000X1 000									**				
7075-T6 BAR 6.000" X 1.000"													

Location

Loc Qty

Loc Code

MAT049

20.3

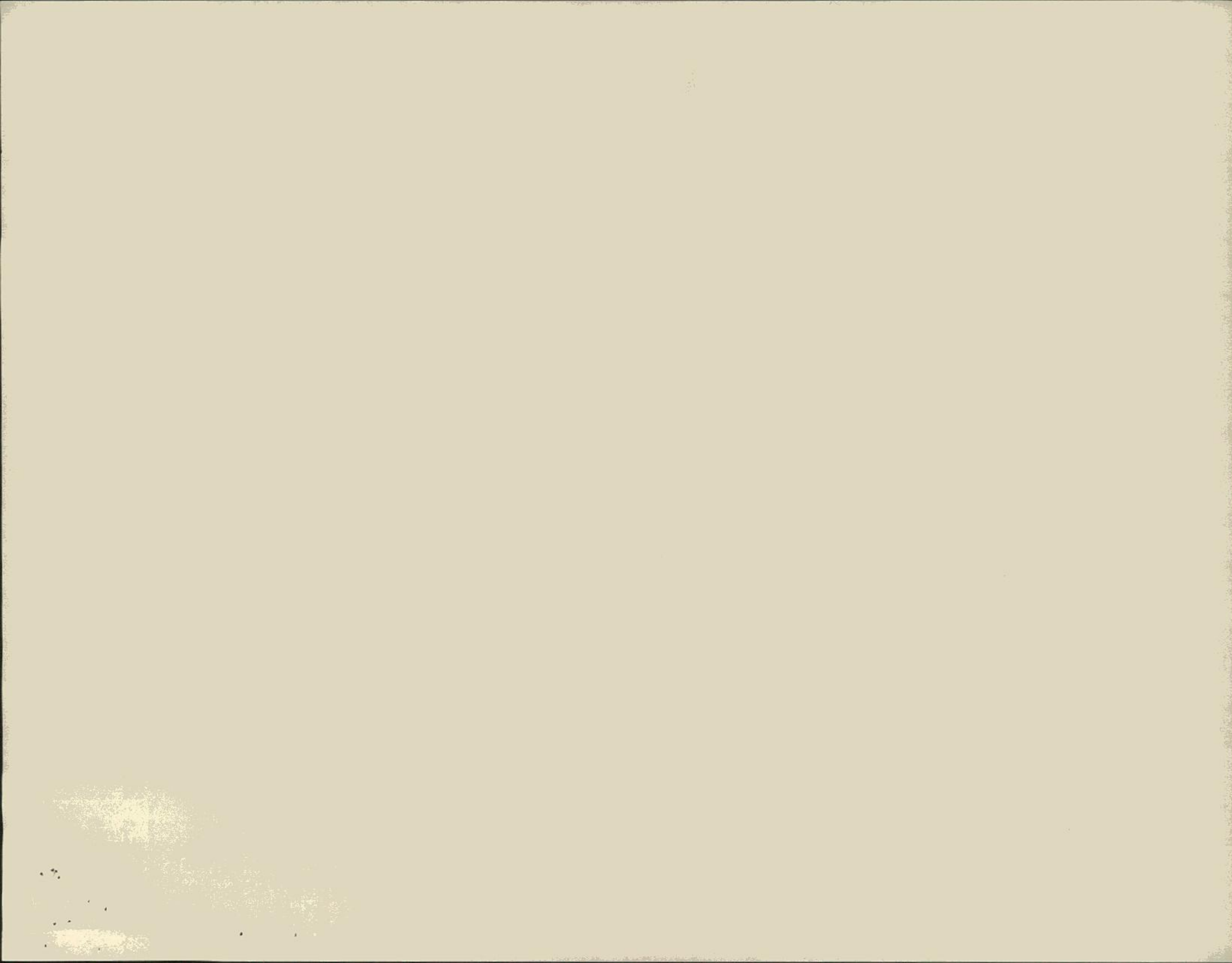
M129891

12

M130014

8.3

(24).875' + 2.6 ft JTC 2014-11-06
 7.8 ft JTC 2014-11-06
 10.2 ft
 11.075'

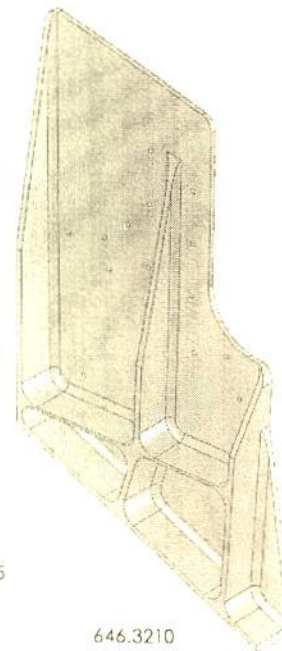
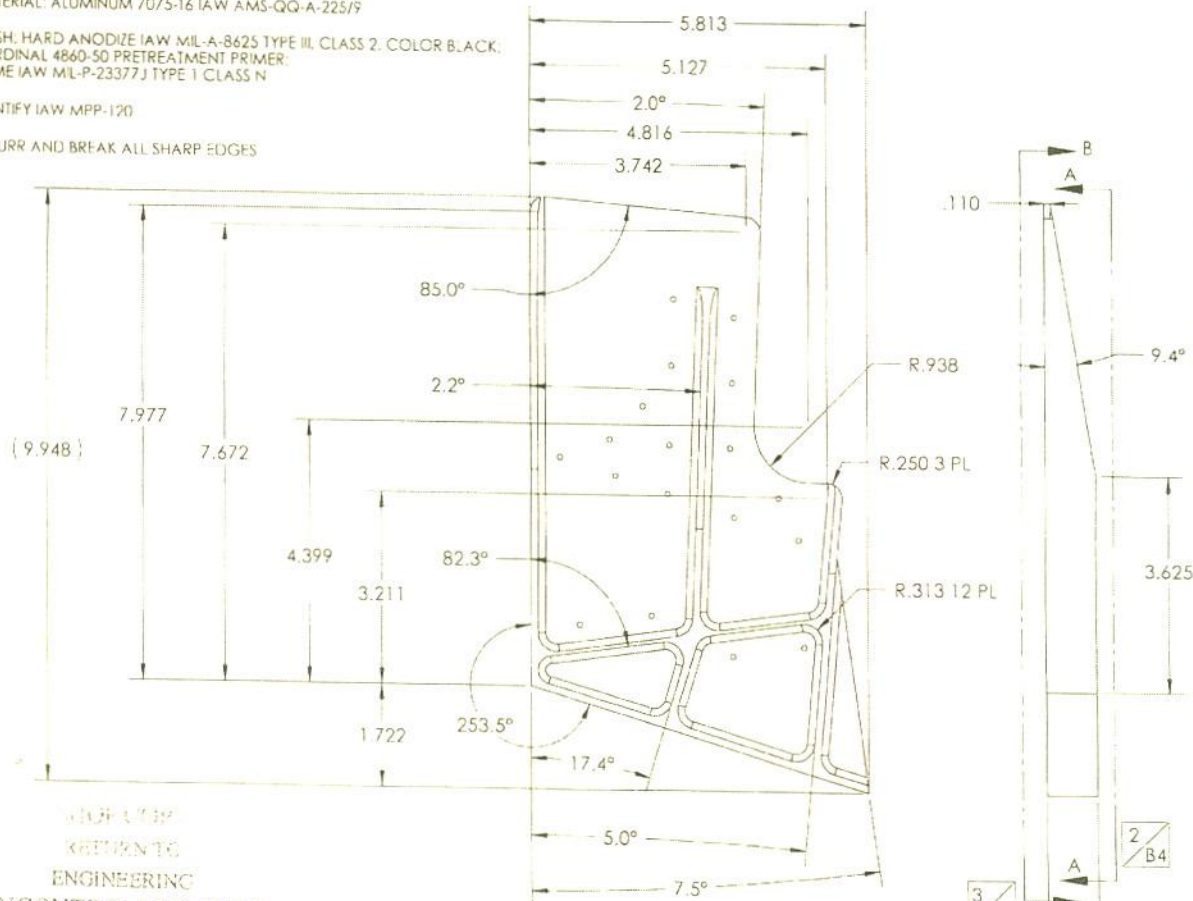


100
100
100

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T6 IAW AMS-QQ-A-225/9
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER; PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 IDENTIFY IAW MPP-120
- 4 DEBURR AND BREAK ALL SHARP EDGES



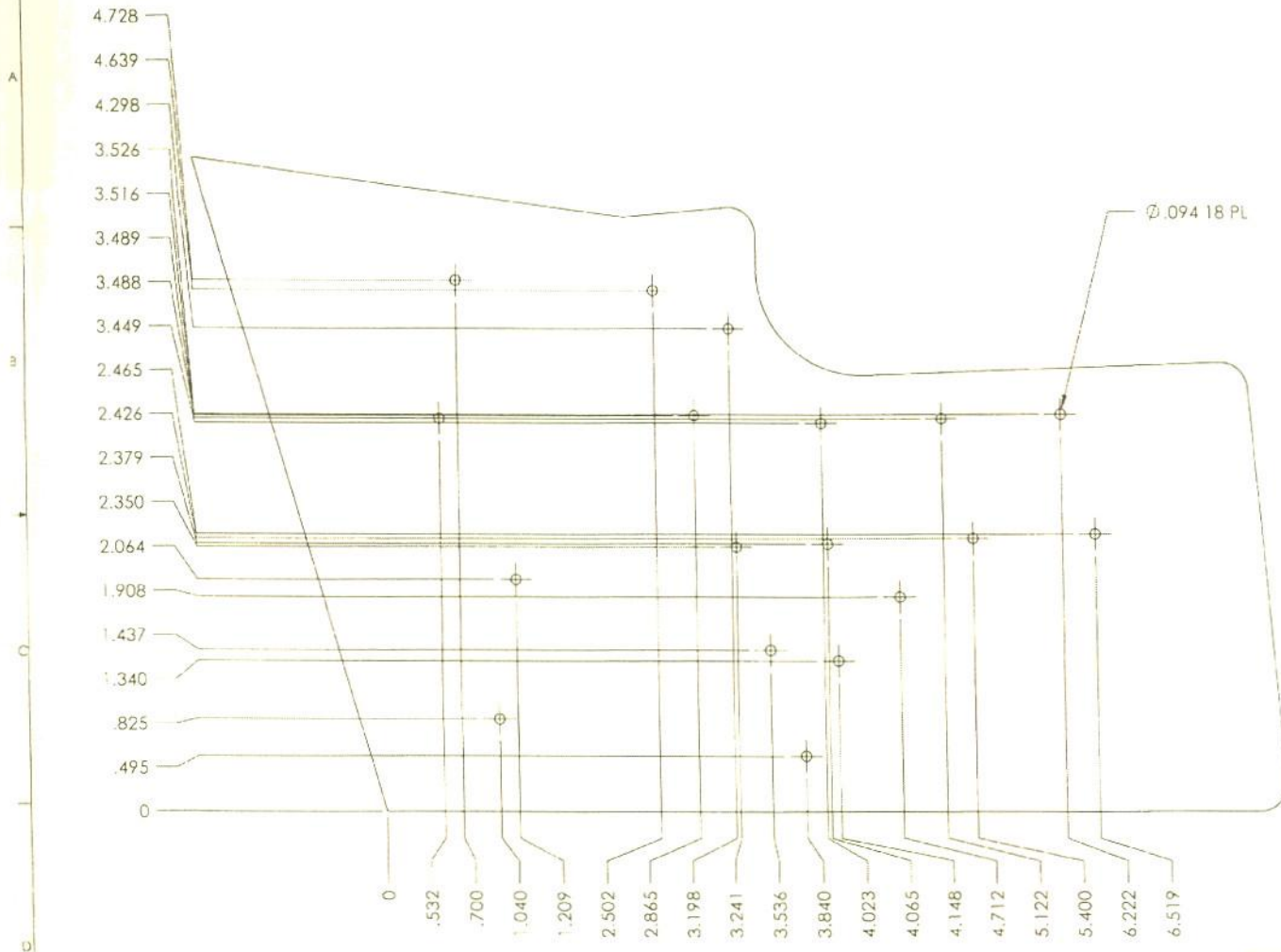
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
124388 MJS
140917

PART #		DESCRIPTION		MATERIAL		SPEC	
646.3210	SUPPORT	APICAL INDUSTRIES		7608 TEMPLE HEIGHTS DR.		OCEANSIDE, CA 92056-3512 (760) 724-5300	
PARTS LIST		SUPPORT		646.3200		REV	
QTY	FINI #	DATE	06-25-90	SCALE: NONE		SHEET	
646.4000	646.4000	DATE	06-25-90	SCALE: NONE		SHEET	
NEXT ASSY [S]		DATE		SCALE: NONE		SHEET	
DATE		DATE		SCALE: NONE		SHEET	
DATE		DATE		SCALE: NONE		SHEET	
DATE		DATE		SCALE: NONE		SHEET	



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REV	DESCRIPTION	DATE	APPROVED

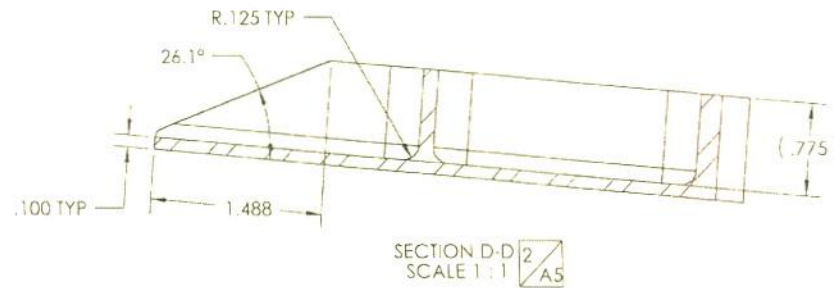
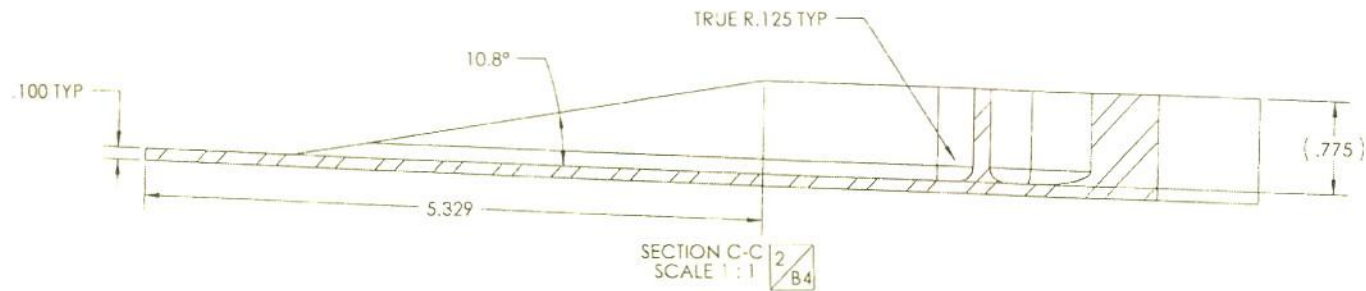


SECTION B-B
SCALE 1:1
ROTATED 90 DEG

NEXT ASSY IS:	DATE: 08/21/08	APICAL INDUSTRIES	
	BY: J. J. JONES		
	CHECKED: J. J. JONES	2608 TEMPLE HEIGHTS DR.	
	DATE: 08/21/08	OCEANSIDE, CA 92056-3512 (760) 774-5300	
UNIT: INCHES/POUNDS		SUPPORT	
DRAWN: J. J. JONES		SHEET 1 OF 4	
CHECKED: J. J. JONES		646.3200	
DATE: 08/21/08		SCALE: 1:1	

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REV	DESCRIPTION	DATE	APPROVED



NEXT ASSY IS:	DESIGNED BY: J. B. D. J. A.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 724-5000	
	CHECKED BY: J. B. D. J. A.			
	DRAWN BY: J. B. D. J. A.			
	DATE: 10/1/88			
CONTRACT NO.			SUPPORT 646.3200	
PART NO.				
MATERIAL			QTY: 1000 QTY: 1000	REV: 1 DATE: 10/1/88
SCALE: 1:1			SHEET 4 OF 4	

Jean-Luc Menard

From: Pablo Bravo
Sent: November-20-14 4:16 PM
To: Jean-Luc Menard
Subject: Re: 646.3210 DEVIATION

This should be fine.

Pablo

On Nov 20, 2014, at 1:40 PM, Jean-Luc Menard <jmenard@dartaero.com> wrote:

Hi Pablo,
Thinnest section is at .097",this acceptable?
THX
JL
<image001.png>

Jean-Luc Ménard
Production Engineering Supervisor

DART AEROSPACE
T 1 613 632-5200 > 227
F 1 613 632-5246
1 800 556- 4166
www.dartaerospace.com

<image002.png>





Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO26682

Purchase Order Date 12/2/2014

PO Print Date 12/9/2014

Page Number 3 of 7

Order From :

VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

6	124388	646.3210 SUPPORT REV. N/C	12/10/2014	1.00	✓	\$14.35	\$14.35
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Yes

12/19/2014

AS ABOVE

SP 14-12-23

Line Total:

\$14.35

7	122950	646.3012 LOWER GUIDE REV.N/C	12/10/2014	10.00		\$19.90	\$199.00
---	--------	---------------------------------	------------	-------	--	---------	----------

Yes

12/19/2014

AS ABOVE

Line Total:

\$199.00

8	125214	646.9810 DEFLECTOR REV.A	12/10/2014	6.00		\$47.25	\$283.50
---	--------	-----------------------------	------------	------	--	---------	----------

Yes

12/19/2014

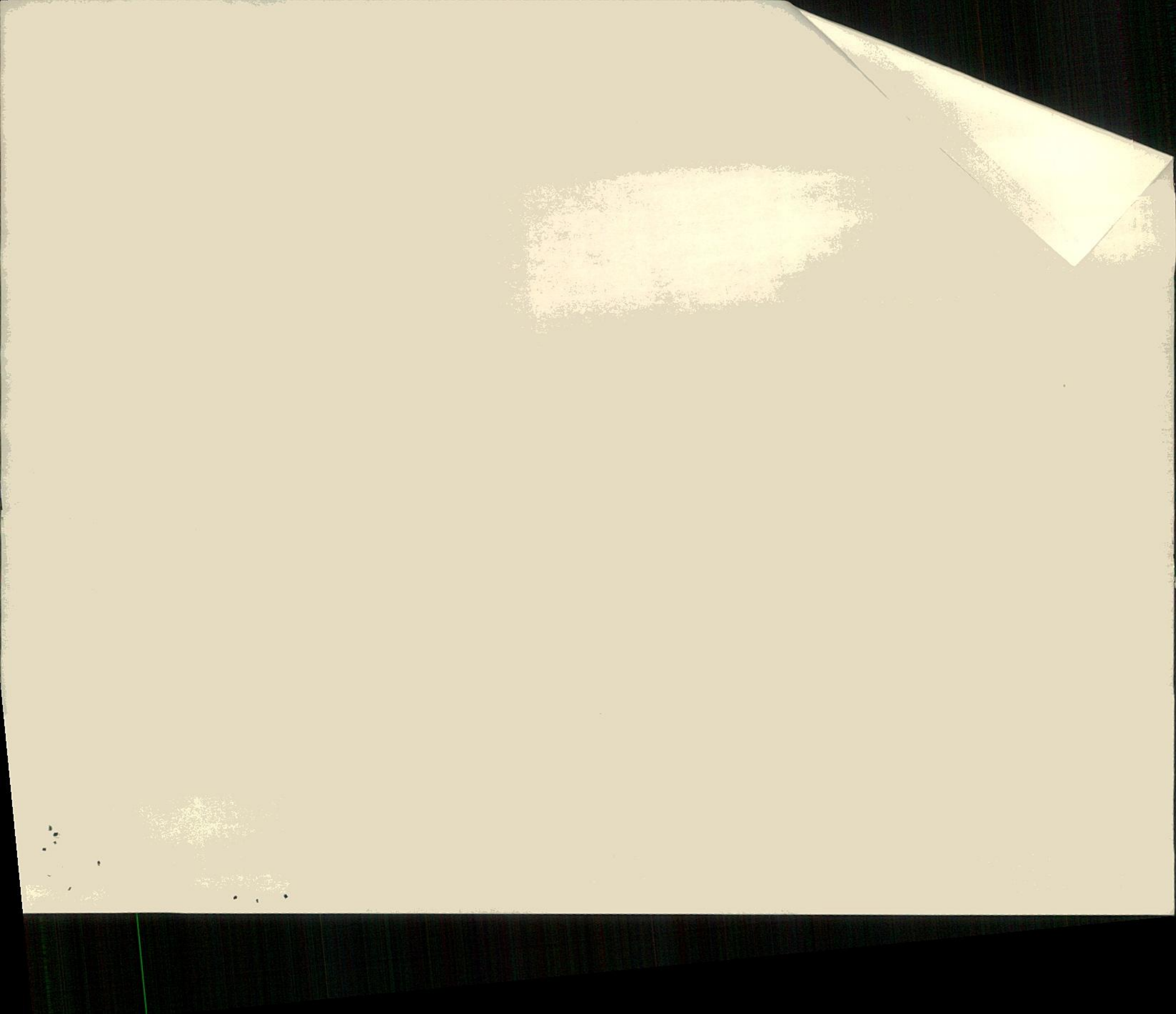
AS ABOVE

Line Total:

\$283.50

Note:

12/9/2014





A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63448

Date: 19-Dec-14

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
	HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140853 PO: PO26682 Line: 3		
5 ea	Part: D5140-2 UPPER CUTTER HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140854 PO: PO26682 Line: 4	Rev: A	
20 ea	Part: 646.2910 DEFLECTOR HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140855 PO: PO26682 Line: 5	Rev: N/C	
1 ea	Part: 646.3210 SUPPORT HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140856 PO: PO26682 Line: 6	Rev: N/C	
10 ea	Part: 646.3012 LOWER GUIDE HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER	Rev: N/C	

SP 14-12-23





A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63448

Date: 19-Dec-14

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
	Job: 20140857	PO: PO26682	Line: 7
6 ea	Part: 646.9810 DEFLECTOR HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140858	Rev: A PO: PO26682	Line: 8
6 ea	Part: 646.9813 LOWER DEFLECTOR HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140859	Rev: A PO: PO26682	Line: 9
Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE: 19/12/14 CERTIFIED SIGNATURE:  RECEIVER SIGNATURE: _____			

SP14-12-23

